

Amendments to the Claims:

Claims 1-4 and 7-37 are pending in this application. Claims 1 and 27 are independent. Claims 9 and 14-16 are herein amended. No new matter has been added by this Amendment.

This listing of claims will replace all prior versions, and listings, of claims in the application:

1 (PREVIOUSLY PRESENTED): An image display apparatus comprising:

a first image modulation means;

a second image modulation means;

a color combining optical system which combines a light of a first wavelength area emitted from said first image modulation means and a light of a second wavelength area emitted from said second image modulation means;

a first lens having positive power arranged between said first image modulation means and said color combining optical system; and

a second lens having positive power arranged between said second image modulation means and said color combining optical system;

said color combining optical system including :

an color combining prism consisting of a plurality of prisms cemented to one another; and

a dichroic film which combines the light of said first wavelength area and the light of said second wavelength area by reflecting the light of said first wavelength area and transmitting the light of said second wavelength area;

wherein an optical thickness of said dichroic film increases to other end from the

end along slant direction to incident optical axis of the light of said first wavelength area, and
wherein said dichroic film is formed on interfaces between two prisms in a
plurality of prisms.

2 (PREVIOUSLY PRESENTED): An apparatus according to claim 1, wherein a thickness of
the dichroic film increases or decreases from one end side to the other end side in the inclining
direction.

3 (PREVIOUSLY PRESENTED): An apparatus according to claim 1, wherein a refractive
index of the dichroic film increases or decreases from one end side to the other end side in the
inclining direction.

4 (PREVIOUSLY PRESENTED): An apparatus according to claim 1, wherein an optical
thickness of said dichroic film increases as an incident angle of the light of said first wavelength
area on the dichroic film increases.

5-6 (CANCELLED):

7 (PREVIOUSLY PRESENTED): An apparatus according to claim 1, wherein said first lens
and said second lens are contacted to said color combining prism.

8 (PREVIOUSLY PRESENTED): An apparatus according to claim 1, wherein said first lens
and said second lens are integrally formed in said color combining prism.

9 (CURRENTLY AMENDED): An apparatus according to claim ~~5~~ 1, wherein said color
combining prism incorporates two dichroic films for reflecting different color light beams, and

an optical thickness of at least one of the two dichroic films increases or decreases from one end side to the other end side in the inclining direction.

10 (PREVIOUSLY PRESENTED): An apparatus according to claim 9, wherein the two dichroic films are formed so as not to cross each other within said color combining prism.

11 (PREVIOUSLY PRESENTED): An apparatus according to claim 9, wherein said color combining prism comprises three prisms.

12 (PREVIOUSLY PRESENTED): An apparatus according to claim 9, wherein said color combining prism comprises four prisms.

13 (PREVIOUSLY PRESENTED): An apparatus according to claim 12, wherein two prisms are arranged between two dichroic films.

14 (CURRENTLY AMENDED): An apparatus according to claim 5 1, wherein said color combining prism includes a plurality of prisms, and

a prism, of the plurality of prisms, which is located nearest to an exit side has at least three optically flat surfaces, and an exit surface also serves as a totally reflecting surface.

15 (CURRENTLY AMENDED): An apparatus according to claim 5 1, wherein said color combining prism sequentially includes, from an exit side,

a first prism having at least three optically flat surfaces, with an exit surface also serving as a totally reflecting surface,

a second prism having at least three optically smooth surfaces, and

a third prism having at least two optically smooth surfaces, and
two dichroic films which reflect different color light beams are arranged between
said respective prisms so as not to cross each other.

16 (CURRENTLY AMENDED): An apparatus according to claim 5 1, wherein said color
combining prism sequentially includes, from an exit side,

a first prism having at least three optically flat surfaces, with an exit surface also
serving as a totally reflecting surface,
a second prism having at least two optically smooth surfaces,
a third prism having at least three optically smooth surfaces, and
a fourth prism having at least two optically smooth surfaces,
two dichroic films which reflect different color light beams are arranged between
said first and second prisms and between said third and fourth prisms so as not to cross each
other.

17 (PREVIOUSLY PRESENTED): Aa apparatus according to claim 1, wherein $0.07 < L/f < 0.35$ is satisfied, where L is a diagonal length of an image display portion of said image
modulation means, and f is a focal length of said positive refracting optical element.

18 (PREVIOUSLY PRESENTED): An apparatus according to claim 9, wherein an angle q_1
defined by a surface of said color combining prism which is located on an exit side and on which
a dichroic film is formed and an exit surface of said color combining prism satisfies

$$20^\circ < q_1 < 35^\circ$$

19 (PREVIOUSLY PRESENTED): An apparatus according to claim 9, wherein an angle q_2 defined by an exit surface of said color combining prism and a surface of said color combining prism which is located on an incident side and on which a dichroic film is formed satisfies

$$40^\circ < q_2 < 50^\circ$$

20 (PREVIOUSLY PRESENTED): An apparatus according to claim 1, wherein a focal length of at least one of said plurality of positive refracting optical elements is different from focal lengths of said remaining positive refracting optical elements.

21 (PREVIOUSLY PRESENTED): An apparatus according to claim 1, further comprising a projection optical system for enlarging/projecting combined image light from said color combining optical system.

22 (PREVIOUSLY PRESENTED): An apparatus according to claim 21, wherein $|L_{in}/L| > 4$ is satisfied, where L_{in} is a distance from an incident pupil of said entire overall image projection optical system including said projection optical system, said color combining prism, and said positive refracting optical element to a display portion of said image modulation means, and L is a diagonal length of the image display portion of said image modulation means.

23 (ORIGINAL): A projection type image display apparatus comprising:

a color separation optical system for color-separating light from a light source into a plurality of color light beams;

a plurality of image modulation means illuminated with the plurality of color light beams;

said color combining optical system defined by claim 1, which color-combines a plurality of color light beams from said plurality of image modulation means; and
a projection optical system for enlarging/projecting combined image light from said color combining optical system.

24 (PREVIOUSLY PRESENTED): A projection type image display apparatus comprising:

a color separation optical system for color-separating light from a light source into a plurality of color light beams;

a plurality of image modulation means illuminated with the plurality of color light beams; and

said color combining optical system defined by claim 22, which color-combines a plurality of color light beams from said plurality of image modulation means and enlarges/projects the combined light.

25 (PREVIOUSLY PRESENTED): A system according to claim 10, wherein said color combining prism comprises three prisms.

26 (PREVIOUSLY PRESENTED): A system according to claim 10, wherein said color combining prism comprises four prisms.

27 (PREVIOUSLY PRESENTED): A dichroic prism comprising:

a plurality of prisms cemented to one another; and

a plurality of dichroic films,

wherein a thickness of at least one of said plurality of dichroic films changes

along a surface on which said at least one dichroic film is formed.

28 (PREVIOUSLY PRESENTED): A dichroic prism according to claim 27, wherein said plurality of dichroic films do not intersect one another in said dichroic prism.

29 (PREVIOUSLY PRESENTED): A dichroic prism according to claim 27, wherein a thickness of each of said plurality of dichroic films changes in a surface on which the dichroic film is formed.

30 (PREVIOUSLY PRESENTED): An image display apparatus comprising:

a plurality of image display elements;

a dichroic prism defined in claim 27; and

a projection optical system for projecting light that was emitted from a light source and through said plurality of image display elements and said dichroic prism on a surface to be projected.

31 (PREVIOUSLY PRESENTED): An image display apparatus comprising:

a plurality of image display elements; and

a dichroic prism defined in claim 27 for combining color lights from said plurality of image display elements.

32 (PREVIOUSLY PRESENTED): An image display apparatus according to claim 31, wherein an angle θ_1 defined by the dichroic film, of said plurality of dichroic films, which is located on an exit side and an exit surface of said dichroic prism satisfies

$$20^\circ < \theta_1 < 35^\circ.$$

33 (PREVIOUSLY PRESENTED): An image display apparatus according to claim 31, wherein an angle θ_2 defined by the dichroic film, of said plurality of dichroic films, which is located on an incident side and an exit surface of said dichroic prism satisfies

$$40^\circ < \theta_2 < 50^\circ.$$

34 (PREVIOUSLY PRESENTED): An image display apparatus according to claim 31 further comprising a plurality of lenses between said plurality of image display elements and said dichroic prism.

35 (PREVIOUSLY PRESENTED): An image display apparatus according to claim 31, wherein the number of said plurality of image display element is three, and three positive lenses are provided such that each positive lens is located between the corresponding image display element and said dichroic prism.

36 (PREVIOUSLY PRESENTED): An image display apparatus comprising:

a first image modulation means;

a second image modulation means;

a color combining optical system which combines a light of a first wavelength area emitted from said first image modulation means and a light of second wavelength area emitted from said second image modulation means;

a first lens having positive power arranged between said first image modulation means and said color combining optical system; and

a second lens having positive power arranged between said second image

modulation means and said color combining optical system;

said color combining optical system including:

a color combining prism consisting of a plurality of prisms

cemented to one another; and

a color combining film which combines the light of said first wavelength area and the light of said second wavelength area by reflecting the light of said first wavelength area and transmitting the light of said second wavelength area;

wherein an optical characteristic of said color combining film changes to other end from the end along slant direction to incident optical axis of the light of said first wavelength area and

wherein said color combining film is formed on interfaces between two prisms in a plurality of prisms.

37 (PREVIOUSLY PRESENTED): An apparatus according to claim 36, wherein an optical thickness of said color combining film increases to other end from the end along slant direction to incident optical axis of the light of said first wavelength area.